

Abstract

A dual damascene-based interconnect structure which includes a liner of aluminum-0.5% copper alloy. The alloy can be implemented by depositing the alloy using a conventional PVD technique. To completely secure against copper
5 atoms possibly penetrating through the aluminum-0.5% copper alloy, one or more Ta/TaN liners can be employed in addition to the aluminum-0.5% copper alloy liner. If Ta/taN is to be used, preferably the Ta/TaN is deposited before the aluminum-0.5% copper alloy is deposited.